We claim:

1. A method for communicating information between a plurality of local area network sections having different transmission speeds, the plurality of local area network sections employing a physical layer protocol in which an unsuccessful transmission is communicated to a transmission source prior to completion of the transmission, the method comprising the steps of:

a) receiving, within the physical layer protocol, a packet that is transmitted from a source terminal in a source network section having a source transmission speed to a destination terminal in a destination network section having a destination transmission speed, the destination transmission speed differing from the source transmission speed;

b) determining the transmission speed for the destination terminal; and

c) re-transmitting, within the physical layer protocol, the received packet to the destination network section at the destination transmission speed.

2. The method of claim 1, further comprising, prior to step c, determining whether the destination network section is busy prior to the re-transmitting step.

3. The method of claim 2, further comprising, after step b, determining whether the destination network section is busy prior to the re-transmitting step.

4. The method of claim 1, wherein the step c further comprises commencing re-transmission of the received packet before the source terminal completes its transmission of the packet.

5. The method of claim 4, further comprising delaying the re-transmission of the received packet.

6. The method of claim 5, further comprising:

commencing re-transmission of the received packet at a higher speed after receiving only a portion of the received packet;

re-transmitting the received packet continuously at the higher speed; and

completing re-transmission of the received packet after completely receiving the received packet.

7. The method of claim 1, further comprising:

controlling a cross point to connect the source network section to the destination network section.

8. The method of claim 2, further comprising:

controlling a first cross point to unilaterally connect the destination network section to an interface circuit;

employing the interface circuit to determine whether the destination network section is busy.

9. The method of claim 8, further comprising:

controlling a second cross point to unilaterally connect the source network section to the destination network section if the interface circuit determines that the destination network section is not busy.

10. The method of claim 8, further comprising:

signaling a collision to the source network section if the interface circuit determines that the destination network section is busy.

11. A method for communicating information between a plurality of local area network sections having different transmission speeds, the method comprising the steps of:

a) receiving a packet that is transmitted from a source terminal in a source network section having a source transmission speed to a destination terminal in a destination network section having a destination transmission speed, the destination transmission speed differing from the source transmission speed;

b) determining the transmission speed for the destination terminal;

c) determining whether the destination network section is not busy prior to receiving all of the packet; and

d) re-transmitting the received packet to the destination network section at the destination transmission speed if the destination network section is determined to be not busy.

12. The method of claim 11, wherein the step c further comprises commencing re-transmission of the received packet before the source terminal completes its transmission of the packet.

13. The method of claim 11, further comprising delaying the re-transmission of the received packet.

14. The method of claim 13, further comprising:

commencing re-transmission of the received packet at a higher speed after receiving only a portion of the received packet;

re-transmitting the received packet continuously at the higher speed; and

completing re-transmission of the received packet after completely receiving the received packet.

15. The method of claim 11, further comprising:

controlling a cross point to connect the source network section to the destination network section.

16. The method of claim 11, further comprising:

controlling a first cross point to unilaterally connect the destination network section to an interface circuit;

employing the interface circuit to determine whether the destination network section is busy.

17. The method of claim 16, further comprising:

controlling a second cross point to unilaterally connect the source network section to the destination network section if the interface circuit determines that the destination network section is not busy.

18. The method of claim 11, further comprising:

signaling a collision to the source network section if the destination network section is determined to be busy.

19. An arrangement for switching between a plurality of hubs that employ a plurality of data rates, the arrangement comprising:

a cross point switch having a plurality of ports, each port operably coupled to one of the plurality of hubs, the cross point switch operable to couple a first port to a second port;

a data speed converter operable to receive packet data transmitted from a first hub at a first data rate, the data speed converter operable to re-transmit the packet data to the first port at a second data rate, the second data rate employed by a second hub connected to the second port.

20. The arrangement of claim 19 wherein the data speed converter is further operable to delay re-transmission of the packet data by a time based on a packet length and a difference between the first data rate and the second data rate.